

for example, MPEP §2173.05(f), favorably referencing Ex parte Porter, 25 USPQ 2d 1144 (Bd. Pat. App. & Inter. 1992), which approved of a reference to an apparatus claim in a method claim.

Moreover, the use of claims such as applicant's claims 25 and 26 is well established. See, for example,

U.S. patent no. 6,295,353, claims 8 and 9;

U.S. patent no. 6,292,773, claims 22-23 and 33-34;

U.S. patent no. 6,292,550, claims 12 and 13;

U.S. patent no. 6,212,189, claim 17;

U.S. patent no. 6,212,160, claim 6;

U.S. patent no. 6,192,122, claims 6 and 7;

U.S. patent no. 6,178,184, claims 20 and 21;

U.S. patent no. 6,177,905, claims 8 and 9;

U.S. patent no. 6,163,607, claims 14 and 15;

U.S. patent no. 6,088,441, claims 8 and 9;

U.S. patent no. 6,064,731, claims 11 and 13;

- U.S. patent no. 6,052,460, claims 17 and 18;

U.S. patent no. 6,038,298, claims 6 and 11;

U.S. patent no. 6,018,762, claim 9;

U.S. patent no. 6,292,672, claims 15-18;

U.S. patent no. 6,298,240, claims 15-18;

U.S. patent no. 6,256,299, claims 10-18;

U.S. patent no. 6,236,858, claims 6-7;

U.S. patent no. 6,195,558, claims 2, 4, 6, 8, 10, 12, 14, and 16;

U.S. patent no. 6,195,542, claims 11-20; and

U.S. patent no 6,195,541, claims 10-11.

For these reasons, applicant respectfully requests that the objection to his claims 25 and 26 be withdrawn.

35 U.S.C. §112, rejection of claims 25 and 26

The Examiner also rejected claims 25 and 26 under the first paragraph of Section 112 because the specification does not support every possible permutation of the claims, i.e., it does not disclose a separate apparatus that performs the methods of any combination of claims 1-24.

In response, applicant has amended claims 25 and 26. The claims as amended fully comply with 37 CFR 1.75 and MPEP §608.01(n) --see MPEP §608.01(n)(1)(A) "Acceptable Multiple Dependent Claim Wording". Claims 25 and 26 are supported by the specification in the same way as each of claims 1-24 is supported by the specification. This is because "limitations or elements of each claim incorporated by reference into a multiple claim must be considered separately. Thus, a multiple dependent claim, as such, does not contain all the limitations of all the alternative claims to which it refers, but rather contains in any one embodiment only those limitations of the particular claim referred to for the embodiment under consideration. Hence, a multiple dependent claim must be considered in the same manner as a plurality of single dependent claims." MPEP §608.01(n)(1)(B), last paragraph.

In view of the above, withdrawal of the Section 112, first paragraph, rejection of claims 25 and 26 as amended is respectfully requested.

The Examiner further rejected claim 25 under the second paragraph of Section 112 because it is an apparatus claim yet does not recite any constituent components, stating that "The claim as currently recited merely sets forth what the apparatus does." This rejection is respectfully traversed.

Functional limitations in apparatus claims are entirely proper. "A functional limitation is an attempt to define something by what it does, rather than by what it is (e.g., as evidenced by its specific structure or specific ingredients). There is nothing inherently wrong with defining some

part of an invention in functional terms. Functional language does not, in and of itself, render a claim improper. [citation omitted] A functional limitation must be evaluated and considered, just like any other limitation of the claim" MPEP §2173.05(g). Moreover, use this type of method-claim limitation to apparatus claims is well established as evidenced by the patents cited above in the response to the objection to claims 25 and 26.

In view thereof, applicant respectfully requests that the Section 112 rejections of his claims 25 and 26 be withdrawn.

35 USC§102(e) rejection of claims 1-26

The Examiner next rejected claims 1-26 under Section 102(e) over Walker et al., of record. This rejection is respectfully traversed.

Walker et al. disclose an arrangement for effecting an optimum allocation of resources to jobs. They select the jobs that must be performed by some deadline time and resources that are expected to become available within that time. They then calculate the projected cost of allocating each job to each resource, i.e., the cost of each job/resource combination. They then effect the combination (i.e., the job-to-resource assignment) that has the lowest cost. In other words, Walker et al. perform only a single value computation for each combination, and then select the combination that has the best value (best cost).

In the language of our claims, Walker et al. may be considered to determine the business value of having a resource service a work item, and selecting a resource to service a work item that produces the highest business value. Contrary to the Examiner's assertion, however, Walker et al. do not disclose either (a) determining a value to the resource of servicing the work item and selecting a resource that has a best combined value of the business value and the value to the resource, or (b) determining a value to the work item of being serviced by the resource and

selecting a work item that has a best combined value of the business value and the value to the work item.

What the Examiner equates with applicant's claim 1 and 13 recitations of "determining a business value of having the resource service the work item"--col. 1, lines 65-67 of Walker et al.--is not a determination of any value at all. Rather, it is an assignment, a selection, of a function that will be used to determine the cost of a job-to-resource assignment. And what the Examiner equates with claim 1 recitations "determining a value to the resource of servicing the work item" and claim 13 recitations of "determining a value to the work item of being serviced by the resource"--col. 2, lines 1-5 of Walker et al.--is the evaluation of that selected function to determine the cost of an individual job-to-resource assignment, that is, the determination of the business value of the assignment. Furthermore, what the Examiner equates with claim 1 recitations of "selecting a determined resource that has a best combined value of the business value and the value to the resource" and claim 13 recitations of "selecting a determined work item that has a best combined value of the business value and the value to the work item--col. 2, lines 6-7 of Walker et al.--is merely the selection of the job/resource combination, i.e., of the job/resource pair, that has the best calculated cost. Consequently, a disclosure, teaching, or suggestion of the last two elements of applicant's claims 1 and 13 is completely missing from Walker et al.

Many of the claims that depend from claims 1 and 13 recite the last two elements in greater detail. Since Walker et al. do not disclose, teach, or suggest those elements at all, they cannot and do not disclose, teach, or suggest the details of these elements. Moreover, all claims that depend from claims 1 and 13 are not rendered unpatentable by Walker et al., for at least the same reasons as claims 1 and 13 are not rendered unpatentable thereby.

What the Examiner equates with applicant's claim 9 and 21 recitations of "determining a business value comprising a sum across all

skills of a product of a skill level of the resource in the skill and a skill weight of the work item for the skill--col. 7, lines 11-24 of Walker et al.--merely discloses that resources have skills, and that projected costs of resource-to-job assignments can take skills into account, and can be weighted for probability. Nowhere do Walker et al. disclose, teach, or suggest a business value that is the sum across skills of a product of skill level and skill weight.

What the Examiner equates with claim 9 recitations of "determining a resource treatment value comprising a sum across all resource treatments of a product of a value of the resource for the resource treatment and a weight of the work item for the resource treatment" and claim 21 recitations of "determining a work item treatment value comprising a sum across all work item treatments of a product of the value of the work item for the work item treatment and a weight of the work item for the work item treatment"--col. 7, lines 18-24 and 35-59 of Walker et al.--merely discloses that projected costs of resource-to-job assignments can be weighted for probability, and that the cost of not allocating each job to a resource must be considered in the computation of the total costs of resource-to-job assignments. Nowhere do Walker et al. disclose, teach, or suggest computing either a value to a work item (job) or a value to a resource that is the sum across all treatments of a product of a value for the treatment and a weight thereof. In fact, as was pointed out in the preceding discussion of claims 1 and 13, Walker et al. do not disclose, teach, or suggest the idea of a resource treatment value or a work-item treatment value at all!

Furthermore, what the Examiner equates with claim 9 recitations of "selecting a determined resource that has a best combined value of its business value and its resource treatment value" and claim 21 recitations of "selecting a determined work item that has a best combined score of its business value and work item treatment value"--col. 2, lines 6-7 of Walker et al.--is merely the selection of the combination, i.e., of the job/resource

pair, that has the best calculated cost. Consequently, a disclosure, teaching, or suggestion of the last three elements of applicant's claims 9 and 21 is missing from Walker et al.

Many of the claims that depend from claims 9 and 21 recite the last three elements of those claims in greater detail. Since Walker et al. do not disclose, teach, or suggest those elements at all, they cannot and do not disclose, teach, or suggest the details of these elements. Moreover, all claims that depend from claims 9 and 21 are not rendered unpatentable by Walker et al. for at least the same reasons as claims 1 and 13 are not rendered unpatentable thereby.

For all these reasons, applicant respectfully asserts that Walker et al. do not render his claimed invention unpatentable. Applicant therefore respectfully requests that the Section 102(e) rejection of his claims over Walker et al. be withdrawn.

Conclusion

Applicant has taken this opportunity to add new claims 27-35, which claim his invention in alternative forms. For example, claim 27 is an alternative claim form to claim 25, and its form was approved in, e.g. U.S. patent no. 6,212,160 (see claim 5). And claim sets 28-31 and 32-35 are alternative forms to claims 1, 9, 13, and 21, respectively. These claims are allowable for the same reasons as claims 1-26.

Attached hereto is a marked up version of the changes made to the specification and claims by the current amendment. The attached pages are captioned "**Version with markings to show changes made.**"

The Examiner's objections and rejections having been properly responded to, applicant suggests that the application is now in condition for allowance. Applicant therefore respectfully requests that the application be reconsidered and thereafter be passed to issue.

Although the foregoing is considered to be dispositive of all issues in the application, if the Examiner deems that a telephone interview would

advance prosecution, she is invited to call applicant's attorney at the number listed below.

Respectfully submitted,
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Version With Markings To Show Changes Made

IN THE SPECIFICATION

On page 33, the paragraph that begins on line 2 has been replaced with the following new paragraph.

1 --A workflow system (FIG. 1) employs a selection engine (114)
2 that attempts to match work items (100) with resources (104) in such a
3 way that it brings the most value to all of the stakeholders in the workflow.
4 Under resource or work-item surplus conditions (FIG. 4 or 5), the selection
5 engine determines either those available resources that possess skills
6 needed by an available work item or those available work items that need
7 skills possessed by an available resource, for each determined resource
8 determines both a business value (RSBV) of having that resource service
9 the work item and either a value (RTV) to that resource of servicing the
10 work item or a value (WTV) to that work item of being serviced by the
11 resource, and then selects the resource that has a best combined value
12 of the business value and the value to the resource or work item. --

IN THE CLAIMS

Claims 25 and 26 have been amended as follows.

Amend claim 25:

1 25. (Amended) An apparatus that performs the method of [any]
2 one of the claims 1-24.

Amend claim 26:

1 26. (Amended) A computer-readable medium containing
2 instructions which, when executed in a computer, cause the computer to
3 perform the method of [any] one of claims 1-24.

The following new claims 27-35 have been added to the application.

1 --27. An apparatus comprising a processor that executes
2 instructions to effect the method of one of claims 1-24.

1 28. An apparatus for selecting a resource for a work item,
2 comprising:

3 means for determining available resources that possess skills
4 needed by the work item;

5 means for determining, for each of the determined resources, a
6 business value of having the resource service the work item;

7 means for determining, for each of the determined resources, a
8 value to the resource of servicing the work item; and

9 means for selecting a determined resource that has a best
10 combined value of the business value and the value to the resource, to
11 serve the work item.

1 29. An apparatus for selecting a resource for a work item,
2 comprising:

3 means for determining available resources that possess skills
4 needed by the work item;

5 means for determining, for each of the determined resources, a
6 business value comprising a sum across all skills of a product of a skill
7 level of the resource in the skill and a skill weight of the work item for the
8 skill;

9 means for determining, for each of the determined resources, a
10 resource treatment value comprising a sum across all resource treatments
11 of a product of a value of the resource for the resource treatment and a
12 weight of the work item for the resource treatment; and

13 means for selecting a determined resource that has a best
14 combined score of its business value and its resource treatment value, to
15 serve the work item

1 30. An apparatus for selecting a work item for a resource,
2 comprising:

3 means for determining available work items that need skills
4 possessed by the resource;

5 means for determining, for each of the determined work items, a
6 business value of having the resource service the work item;

7 means for determining, for each of the determined work items, a
8 value to the work item of being serviced by the resource; and

9 means for selecting a determined work item that has a best
10 combined value of the business value and the value to the work item to be
11 served by the resource.

1 31. An apparatus for selecting a work item for a resource,
2 comprising:

3 means for determining available work items that need skills
4 possessed by the resource;

5 means for determining, for each of the determined work items, a
6 business value comprising a sum across all skills of a product of a skill
7 level of the resource in the skill and a skill weight of the work item for the
8 skill;

9 means for determining, for each of the determined work items, a
10 work item treatment value comprising a sum across all work item
11 treatments of a product of the value of the work item for the work item
12 treatment and a weight of the work item for the work item treatment; and

13 means for selecting a determined work item that has a best
14 combined score of its business value and work item treatment value, to be
15 served by the resource.

1 32. An arrangement for selecting a resource for a work item,
2 comprising;

3 an effector of determining available resources that possess skills
4 needed by the work item;

5 an effector of determining, for each of the determined resources, a
6 business value of having the resource service the work item;

7 an effector of determining, for each of the determined resources, a
8 value to the resource of servicing the work item; and

9 an effector of selecting a determined resource that has a best
10 combined value of the business value and the value to the resource, to
11 serve the work item.

1 33. An arrangement for selecting a resource for a work item,
2 comprising:

3 an effector of determining available resources that possess skills
4 needed by the work item;

5 an effector of determining, for each of the determined resources, a
6 business value comprising a sum across all skills of a product of a skill
7 level of the resource in the skill and a skill weight of the work item for the
8 skill;

9 an effector of determining, for each of the determined resources, a
10 resource treatment value comprising a sum across all resource treatments
11 of a product of a value of the resource for the resource treatment and a
12 weight of the work item for the resource treatment; and

13 an effector of selecting a determined resource that has a best
14 combined score of its business value and its resource treatment value, to
15 serve the work item

1 34. An arrangement for selecting a work item for a resource,
2 comprising:

3 an effector of determining available work items that need skills
4 possessed by the resource;

5 an effector of determining, for each of the determined work items, a

6 business value of having the resource service the work item;
7 an effector of determining, for each of the determined work items, a
8 value to the work item of being serviced by the resource; and
9 an effector of selecting a determined work item that has a best
10 combined value of the business value and the value to the work item to be
11 served by the resource.

1 35. An arrangement for selecting a work item for a resource,
2 comprising:
3 an effector of determining available work items that need skills
4 possessed by the resource;
5 an effector of determining, for each of the determined work items, a
6 business value comprising a sum across all skills of a product of a skill
7 level of the resource in the skill and a skill weight of the work item for the
8 skill;
9 an effector of determining, for each of the determined work items, a
10 work item treatment value comprising a sum across all work item
11 treatments of a product of the value of the work item for the work item
12 treatment and a weight of the work item for the work item treatment; and
13 an effector of selecting a determined work item that has a best
14 combined score of its business value and work item treatment value, to be
15 served by the resource.--